

# SC WaterWays

answering today's water resource challenges for future generations

## Rain Garden Plants: (*Physocarpus opulifolius*) - Ninebark

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March 2016

Rain gardens are becoming an increasingly popular option for gardeners looking to create an aesthetically pleasing garden that manages runoff, improves water quality, and provides wildlife habitat. Rain gardens are “depression gardens” – designed and located to receive runoff from a roof, driveway, or lawn. These features work with nature to collect, filter, and infiltrate runoff, while showing off a variety of vibrant, colorful, and low-maintenance plants.

*Physocarpus opulifolius*, from the rose (Rosaceae) family, is a native plant well-suited for rain gardens that provides year-round color from foliage, flowers, and bark. It is often called common ninebark and Atlantic ninebark. The common name – ninebark – refers to the winter appearance of the shrub (Figure 1), when the showy bark, consisting of reddish inner-bark framed by paper-like strips of older bark, peels away in layers; sometimes as many as 9 layers of exfoliating bark are visible.

### History and Traditions

*Physocarpus* comes from the Greek *Physo* (bladder or bellows), and *carpus* (fruit) refers to the bladder-shaped, swollen fruit that form after flowering. The specific epithet, *opulifolius* is derived from the latin *opulo*, meaning wealth/profusion, and *folius*, meaning leaves<sup>2</sup>. Ninebark is native to the eastern US; Native Americans used a decoction (extract resulting from boiling tissues down to concentrate desired compounds) made from the inner bark as pain relievers, analgesics, emetics, laxatives, and cathartics<sup>3,4</sup>. However, excessive doses of the bark decoctions can be toxic!



Figure 1. Common ninebark - cinnamon-color exfoliating bark during winter.

**Table 1. Preferred site conditions**

**Light:** Full sun, part shade, shade.  
**Zones:** 2 to 8  
**Origin:** Eastern North America  
**Type:** Deciduous shrub  
**Moisture:** Adaptable. Moist to dry.  
**Moisture timing:** Deep watering between periods of drought.  
**Soil:** Most types. Clay, dry, shallow, rocky, sandy.

## Benefits

Ninebark is native to South Carolina and is a fast growing species that is free of serious insect and disease pests. The white or magenta (red) flowers add life to your garden (Figure 2), and are a nectar source for native bees, honey bees<sup>4</sup>, and butterflies. Native insect species, such as the spiraea leaf beetle (*Calligrapha spiraeae*), caterpillars of the dimorphic Eulithis moth (*Eulithis molliculata*), and aphids (*Aphis neilliae*)<sup>4</sup> rely on ninebark foliage their primary food-source. Despite potential for foliar damage (potentially defoliation with large populations), feeding by these insects will not kill established plantings<sup>5</sup>. The fruit serve as a food source for a variety of game birds and small mammals<sup>6</sup>. The beautiful foliage, that ranges in color from green to bright or burgundy red (Figure 3), also provides excellent cover or habitat for native bird species due to its dense habit.



Figure 3. Foliar coloration of ninebark – new growth on cultivars is often brightly colored.



Figure 2. Common ninebark – stages of flowering from bud initiation, to flower, to seed-head development



**Table 2. Design considerations - growth habit and plant interest**

|  |
|--|
| <b>Height &amp; Width:</b> 3-10' h x 3-9' w (cultivar dependent)   |
| <b>Spacing:</b> 3 to 9'  |
| <b>Growth rate:</b> Moderate to fast.  |
| <b>Habit:</b> Upright, spreading.  |
| <b>Foliage:</b> Coarse-textured, simple leaves with crenate-dentate lobes. Color is cultivar dependent: deep green, chartreuse, gold, purple, to burgundy. |
| <b>Flower:</b> White to pink 5-petal flowers in dense clusters from May to June.   |
| <b>Fall – winter interest:</b> Winter interest: Persistent seedpods and yellow foliage in fall, striated, exfoliating reddish-brown bark in winter.        |

## Planting and Care

Ninebark is tolerant to a wide range of site conditions. Flowers are at their most colorful in full sun conditions, but color fades in shady conditions for most cultivars. However, in hotter regions (Zone 7b—8), ninebark may perform better with afternoon shade. Ninebark is drought tolerant and grows well in harsh conditions (clay or rocky soils). In natural settings, ninebark is commonly found growing in moist soils as a thicket, along streams, in sand or gravel bars, or on rocky slopes and bluffs<sup>6</sup>. Named cultivars (see list of selected cultivars below) are usually preferred in cultivated landscape settings, as the straight species is more unkempt with less showy foliage.

Overgrown plantings of ninebark can be rejuvenated by pruning plants to the ground in late winter<sup>1,6</sup>. If the peeling bark of the shrub is desired for winter interest, care should be taken to avoid pruning too frequently, as the showy bark only forms on older stems, greater than ½" in diameter. If ninebark is used as a specimen (focal point) planting, selectively prune branches from both the interior and exterior of the plant, leaving both old and new foliage for contrasting bark coloration. Removing branches from the interior of the plant also increases air circulation and reduces the potential for foliar diseases in susceptible cultivars.

## Garden Design

The straight species character of ninebark is “difficult to use in small home landscapes,” but cultivated varieties have better foliar color and more appealing aesthetics<sup>7</sup>. Ninebark use in the landscape should be influenced by (1) desired size of mature plantings and (2) cultivar selection for mature size and foliar coloration. Ninebark is especially suited for use as a specimen, but can be grouped in border plantings within landscape beds, or used as a hedge or screen, or in open woodland and naturalized areas (Figure 4).

Ninebark pairs well with many other garden species; companion plants to consider should also tolerate similar soil moisture conditions, for best garden performance. Plants to consider planting with ninebark include:



Figure 4. Common ninebark shrub in landscape, flowering and over winter when bark is showy.

## Companion Plants

### Small trees:

- River birch (*Betula nigra*): textured, exfoliating bark, delicate appearance, sun
- Fringetree (*Chionanthus virginicus*): white clouds of delicate flowers hang below newly emerging foliage in late spring, sun to part shade

### Shrubs:

- Carolina allspice (*Calycanthus floridus*): burgundy purple, fragrant flowers in late spring, full sun to part shade
- Star anise (*Illicium floridanum*): dark red flowers in mid-spring, evergreen, part shade

### Perennials:

- Eastern bluestar (*Amsonia tabernaemontana*): pale blue flowers rise above medium textured foliage in spring, foliage turns yellow in fall, full sun to part shade
- Siberian iris (*Iris sibirica*): white, yellow, purple, and blue flowers in spring, full sun
- Spiked speedwell (*Veronica spicata*): rose-pink to deep purple flowers in early- to mid-summer, full sun

### Ornamental grasses:

- Sweetgrass or muhlygrass (*Muhlenbergia capillaris*): white or pink blooms provide fall and winter interest, full sun to part shade
- River oats (*Chasmanthium latifolium*): delicate seed heads from late summer to fall, part shade to shade

## Recommended Cultivars

Center Glow™ – 7-8' h and 8-9' w. Leaves emerge yellowish green and darken to reddish purple. Fast, dense, rounded growth habit. White, pink-tinged flowers.

Coppertina™ – 8-10' h x 6-8' w. Coppery-orange spring flush darkens to burgundy-red in summer. Gently arching habit. White flowers. Showy red seed-capsules in fall.

Diabolo® ('Monlo') – 8-10' h x w. Deep-purple foliage. Upright, spreading, open habit. Pinkish-white flowers, red drooping fruit.

Lady in Red™ – 3-5' h and 5' w. Chestnut-red foliage from spring through fall. Pink flowers. Little pruning needed for tidy habit.

'Luteus' ('Aureus') – 8-10' h x w. Yellow foliage matures to green in late summer. Cream-colored flowers. Extensive suckering.

'Nanus' – 1-2' h and 2-3' w. Green foliage. Dwarf, spreading, somewhat coarse growth habit. White flowers.

'Nugget' – 3-6' h x w. Yellow to lime green foliage. Clusters of white flowers along stems. Dark brown seed capsules. Vase-shaped habit. Susceptible to leaf spot, powdery mildew, and fire-blight.

'Snowfall' – 6-10' h x w. Dark green foliage. Dense pink and white floral display over nearly all branches. Bright red, densely packed fruits. Form is open and "messy," cinnamon colored bark is spectacular.<sup>1</sup>

Summer Wine™ – 4-6' h x w. Deeply-cut, wine red foliage. Pinkish-white blooms. Graceful, Dense, free-branching, mounding habit. Less likely to spread by suckering. Prune after bloom.

<sup>1</sup>Clemson University Extension does not promote the use of any herb or medicine without your doctor's knowledge and supervision.

## References:

- <sup>1</sup> Lattier, J.D. and T. Anísco. 2008. The True Colors of Ninebark (Part 2). American Nurseryman. p 36-43.
- <sup>2</sup> Lady Bird Johnson Wildflower Center. 2013. *Physocarpus opulifolius* L. (Maxim). Accessed 13 Feb 2013. <[http://www.wildflower.org/plants/result.php?id\\_plant=PHOP](http://www.wildflower.org/plants/result.php?id_plant=PHOP)>
- <sup>3</sup> Native American Ethnobotany Database. 2013. Accessed 13 Feb 2013. <<http://herb.umd.umich.edu/herb/search.pl?searchstring=Physocarpus+opulifolius>>
- <sup>4</sup> Hilty, J. 2013. Illinois Wildflowers: Ninebark. Accessed 13 Feb 2013. <<http://www.illinoiswildflowers.info/trees/plants/ninebark.htm>>
- <sup>5</sup> Hahn, J. 2015. Calligrapha beetles. University of Minnesota Extension. Accessed 13 Nov 2015. <<http://www.extension.umn.edu/garden/insects/find/calligrapha-beetles/>>
- <sup>6</sup> Guala, G. 2003. Plant Guide : Atlantic ninebark *Physocarpus opulifolius* (L.). USDA-Natural Resource Conservation Service, National Plant Data Center, Baton Rouge, LA.
- <sup>7</sup> Dirr, M.A. 2009. Manual of Woody Landscape Plants. 6th ed. Stipes Publishing. Champaign, IL.

All images: Sarah A. White

With appreciation to content reviewers, N. Jordan Franklin, Clemson Extension Service, Jackie Kopack Jordan, Clemson Extension Service, and Dr. John C. Majsztrik, Clemson University.  
Executive Editor: Katie Buckley, Extension Associate, Clemson Extension Service.



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